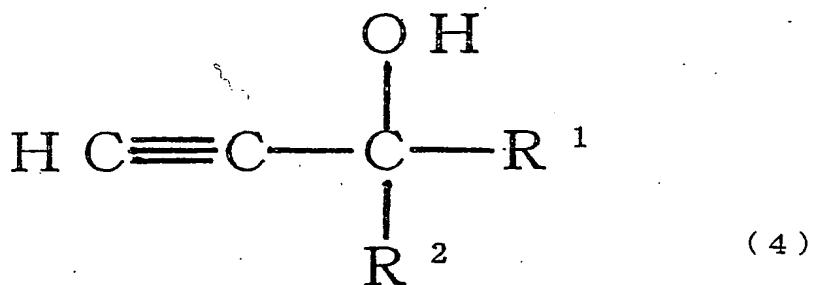


ABSTRACT

The invention provides processes for the preparation of fused pyrroles, preferably indoles, which permit the use of inexpensive aromatic amines themselves as the raw material and attain high atomic efficiency and high regioselectivity. Specifically, a process for the preparation of fused pyrroles, e.g., indoles bearing methyl at the 3-position of pyrrole ring and R¹ (or R²) of the general formula (4) at the 2-position thereof, or 3,3-disubstituted indoles bearing R¹ and R² at the 3-position of pyrrole ring and methyl at the 2-position thereof, characterized by reacting an alkynol of the general formula (4) with an aromatic primary amine in the presence of a ruthenium complex, more preferably with an acid or an ammonium salt thereof being made to coexist.



[In the general formula (4), R¹ and R² are each independently hydrogen, optionally substituted alkyl, or optionally substituted aryl, or alternatively R¹ and R² may be united to form an alkylene chain.]